

**Notice of Allowability**

Application No.

09/720,609

Examiner

Jurie Yun

Applicant(s)

AOKI ET AL.

Art Unit

2882

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/5/03.
2. ☒ The allowed claim(s) is/are 2,5,6,18-21 and 26-33.
3. ☒ The drawings filed on 26 December 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892)  | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____             |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____               | 6 <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | 9 <input type="checkbox"/> Other  |

### DETAILED ACTION

1. The amendment filed 9/5/03 has been entered.

#### ***Allowable Subject Matter***

2. Claims 2, 5, 6, 18-21, and 26-33 are allowed.
3. The following is an examiner's statement of reasons for allowance: Prior art fails to disclose a plasma display panel characterized in that the dielectric layer is made of a glass that contains at least ZnO and 10 wt% or less of R<sub>2</sub>O and does not substantially contain PbO and Bi<sub>2</sub>O<sub>3</sub>, wherein R is selected from a group consisting of Rb, Cs, Cu, and Ag, as claimed in claim 20.

Prior art also fails to disclose a plasma display panel characterized in that the dielectric layer is made of a glass which is composed of 20-30 wt% of P<sub>2</sub>O<sub>5</sub>, 30-40 wt% of ZnO, 30-45 wt% of B<sub>2</sub>O<sub>3</sub>, and 1-10 wt% of SiO<sub>2</sub> and a product of permittivity and loss factor tan of the dielectric layer is 0.12 or less, as claimed in claim 21.

Prior art also fails to disclose a plasma display panel characterized in that the dielectric layer is made of a glass which is composed of 9-20 wt% of Nb<sub>2</sub>O<sub>5</sub>, 35-60 wt% of ZnO, 25-40 wt% of B<sub>2</sub>O<sub>3</sub>, and 1-10 wt% of SiO<sub>2</sub>, and a product of permittivity and loss factor tan of the dielectric layer is 0.12 or less, as claimed in claim 26.

Prior art also fails to disclose a plasma display panel characterized in that the dielectric layer is composed of a first dielectric layer which either is a thin film of SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub> or ZnO or is made of a glass containing at least PbO or Bi<sub>2</sub>O<sub>3</sub> and covers the plurality of pairs of display electrodes, and a second dielectric layer made of a glass in

which a product of permittivity and loss factor  $\tan \delta$  is 0.12 or less, the second dielectric layer covering the first dielectric layer, as claimed in claim 27.

Prior art also fails to disclose a plasma display panel characterized in that the dielectric layer is made of a glass that contains 10-25 wt% of  $P_2O_5$ , 20-35 wt% of ZnO, 30-40 wt% of  $B_2O_3$ , 5-12 wt% of  $SiO_2$ , 10 wt% or less of  $R_2O$ , and 10 wt% or less of DO, and does not substantially contain PbO and  $Bi_2O_3$ , and wherein D is selected from a group consisting of Mg, Ca, Ba, Sr, Co, Cr, and Ni, as claimed in claim 28.

Prior art also fails to disclose a plasma display panel characterized in that the dielectric layer is composed of a ZnO- $P_2O_5$ -base glass which contains 42-50 wt% of  $P_2O_5$ , 35-50 wt% of ZnO, 7-14 wt% of  $Al_2O_3$ , 5 wt% or less of  $Na_2O$ , and 10 wt% or less of  $R_2O$ , and wherein R is selected from a group consisting of K, Rb, Cs, Cu, and Ag, as claimed in claim 29.

Prior art also fails to disclose a plasma display panel characterized in that the dielectric layer is composed of a ZnO-base glass which contains 1-15 wt% of ZnO, 20-40 wt% of  $B_2O_3$ , 10-30 wt% of  $SiO_2$ , 5-25 wt% of  $Al_2O_3$ , 3-10 wt% of  $Li_2O$ , 2-15 wt% of MO, and 10 wt% or less of  $R_2O$  and does not substantially contain PbO and  $Bi_2O_3$ , and wherein R is selected from a group consisting of K, Rb, Cs, Cu, and Ag and wherein M is selected from a group consisting of Mg, Ca, Ba, Sr, Co, and Cr, as claimed in claim 30.

Prior art also fails to disclose a plasma display panel characterized in that the dielectric layer is composed of a ZnO-base glass which contains 35-60 wt% of ZnO, 25-45 wt% of  $B_2O_3$ , 1-10.5 wt% of  $SiO_2$ , 1-10 wt% of  $Al_2O_3$ , 5 wt% or less of  $Na_2O$ , and 10

wt% or less of  $R_2O$  and does not substantially contain  $PbO$  and  $Bi_2O_3$ , and wherein R is selected from a group consisting of K, Rb, Cs, Cu, and Ag, as claimed in claim 31.

Prior art also fails to disclose a plasma display panel characterized in that the dielectric layer is composed of a  $ZnO-Nb_2O_5$ -base glass which contains 9-19 wt% of  $Nb_2O_5$ , 35-60 wt% of  $ZnO$ , 20-38 wt% of  $B_2O_3$ , 1-10.5 wt% of  $SiO_2$ , 5 wt% or less of  $Li_2O$ , and 10 wt% or less of  $R_2O$  and does not substantially contain  $PbO$  and  $Bi_2O_3$ , and wherein R is selected from a group consisting of K, Rb, Cs, Cu, and Ag, as claimed in claim 32.

Prior art also fails to disclose a plasma display panel characterized in that the dielectric layer is composed of a  $ZnO$ -base glass which contains 35-60 wt% of  $ZnO$ , 25-45 wt% of  $B_2O_3$ , 1-12 wt% of  $SiO_2$ , 1-10 wt% of  $Al_2O_3$ , 5 wt% or less of  $K_2O$ , and 10 wt% or less of  $R_2O$  and does not substantially contain  $PbO$  and  $Bi_2O_3$ , and wherein R is selected from a group consisting of Rb, Cs, Cu, and Ag, as claimed in claim 33.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jurie Yun whose telephone number is 703 308-3535. The examiner can normally be reached on Monday-Friday 8:30-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 703 308-4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0956.



Jurie Yun  
October 1, 2003



DAVID V. BRUCE  
PRIMARY EXAMINER